```
     import java.awt.*;
5    import java.awt.event.*;
     import javax.swing.*;
     import java.io.*;

     public class CSApplet extends JApplet
10   {
          private String image;
          private double physicalWidth;
          private double physicalHeight;
          public void init()
15        {
               super.init();

               physicalWidth = 0.0;
               physicalHeight = 0.0;
20
               // Read in the values of the parameters from
     the html page
               // The parameters are image, physicalWidth, and
     physicalHeight
25
               image = getParameter("image");

               String param = getParameter("physicalWidth");

30             if (param != null)
               {
                    physicalWidth = Double.parseDouble(param);
               }

35             param = getParameter("physicalHeight");

               if (param != null)
               {
                    physicalHeight =
40   Double.parseDouble(param);
               }

               // Add a panel to the applet where the image
     will be drawn
45             Container contentPane = getContentPane();

               try
               {
                    // Create the panel and pass it the html
50   parameter values
```

```
                    contentPane.add(new CSPanel(image,
physicalWidth, physicalHeight));
            }
            catch (IOException e)
            {
            }
        }
    }

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.util.*;
import java.io.*;

class CSPanel extends JPanel
{
        private String imageName;
        private double physicalWidth;
        private double physicalHeight;
        private int imageResX;
        private int imageResY;
        private Image image;
        CSPanel(String imageName, double physicalWidth,
double physicalHeight) throws IOException
        {
                this.imageName = imageName;
                this.physicalWidth = physicalWidth;
                this.physicalHeight = physicalHeight;

                // Hack for reading the xResolution and
yResolution from the JPEG header
                FileInputStream in = new FileInputStream(new
File(imageName));
                DataInputStream din = new DataInputStream(in);

                // Skip over the first seven shorts
                for (int i = 0; i < 7; i++)
                {
                        din.readShort();
                }

                // get the x/y resolution
                imageResX = din.readShort();
                imageResY = din.readShort();

                // close streams
                din.close();
                in.close();

                // read in the image
```

```java
        image =
Toolkit.getDefaultToolkit().getImage(imageName);

        // wait until the image is entirely read in
        MediaTracker tracker = new MediaTracker(this);
        tracker.addImage(image, 0);

        try
        {
            tracker.waitForID(0);
        }
        catch(InterruptedException e)
        {
        }
    }
    public void paintComponent(Graphics g)
    {
        super.paintComponent(g);

        // get the logical screen resolution ie
640x480, 1024x768
        Toolkit tk = Toolkit.getDefaultToolkit();
        Dimension screen = tk.getScreenSize();

        // compute the physical size of the image
        double xInches = image.getWidth(this) /
(double) imageResX;
        double yInches = image.getHeight(this) /
(double) imageResY;

        // compute the physical dpi of the display
        double xDPI = screen.width / physicalWidth;
        double yDPI = screen.height / physicalHeight;

        // compute the logical width of the image
        double newWidth = xDPI * xInches;
        double newHeight = yDPI *yInches;

        // setup the graphics context
        Graphics2D g2 = (Graphics2D) g;

    g2.setRenderingHint(RenderingHints.KEY_ANTIALIASING,
RenderingHints.VALUE_ANTIALIAS_ON);

    g2.setRenderingHint(RenderingHints.KEY_RENDERING,
RenderingHints.VALUE_RENDER_QUALITY);

        // draw the image in the panel with scaling
        g2.drawImage(image, 0, 0, (int) newWidth, (int)
newHeight, null);
    }
```

```
                     }

                     <!doctype html public "-//w3c//dtd html 4.0 transitional//en">
                     <html>
  5                  <head>
                       <meta name="GENERATOR" content="Mozilla/4.61 [en] (WinNT; I)
                     [Netscape]">
                       <title>TestApplet1</title>
                     </head>
 10                  <body>
                     <object classid="clsid:8AD9C840-044E-11D1-B3E9-00805F499D93"
                         width="100%" height="100%" align="middle"
                         codebase="http:/<object classid="clsid:8AD9C840-044E-11D1-B3E9-
                     00805F499D93"
 15                      width="100%<param NAME="code" VALUE="CSApplet.class"><param
                     NAME="codebase" VALUE="classes/"><param NAME="type"
                     VALUE="application/x-java-applet;version=1.2.2"><param NAME="image"
                     value="d:/patent/moose.jpg"><param NAME="physicalWidth"
                     value="11.25"><param NAME="physicalHeight" value="8.5"><param
 20                  NAME="scriptable" VALUE="true">No
                     JDK 1.2 support for APPLET!!</object>
                     </body>
                     </html>

 25
```